

## MC generation for the B group

Aim:

generation of large MC samples of

- “*Generic*” *b* production, *un-decayed*
- “Specific” samples of  $b\bar{b}$  /  $c\bar{c}$  hadronic triggers (*full simulation*)
  - Generator: PYTHIA
  - Decayer: QQ
  - *Realistic simulation*
- Use dedicated cdfa (UK) (fcdflnx2 equivalent)

# MC generation for the B group

- News and status on web page:

[http://www-cdf.fnal.gov/internal/people/links/SaverioDauria/mc\\_status\\_bb.html](http://www-cdf.fnal.gov/internal/people/links/SaverioDauria/mc_status_bb.html)

- 75 k events **fully simulated** as run 142110 passing TTT loose cuts (3 days on dedicated cdfa)
- 25 k went through production 4.9.0

## Validation in progress:

- At low level: SiliMon, SiHitAnalyzer (Saverio, (Matt)) → Silicon coverage, hits, charge
- beam line position (Alex ?)
- At physics level: may be Ivan Vila ?

Data are rootd-accessible from

[fcdfdata007.fnal.gov:  
/cdf/scratch/dauria/bbPythia490/  
pythia\\_bb\\_prod\\_208\\_\\*.prod](http://cdfdata007.fnal.gov:/cdf/scratch/dauria/bbPythia490/pythia_bb_prod_208_*.prod)

# MC generation for the B group

- Corrections and upgrades from previous sample:
  - Silicon noise correctly simulated
  - Displaced vertex using DB and GenPrimVertMods
  - Silicon mis-alignment in Simulation (for svtsim)
- In progress:
  - Full trigsim (in particular svtsim)
  - Event filtering based on trigsim
- Plan:
  - Simulate multiple runs
  - Simulate multiple runs in the same job, weighted by their luminosity
  - Complete validation on 142110
  - Enter sample in DataFileCatalog
  - Generate l+svt test sample
  - Generate cc test sample

## MC generation for the B group

Problems with 4.9.0:

NONE

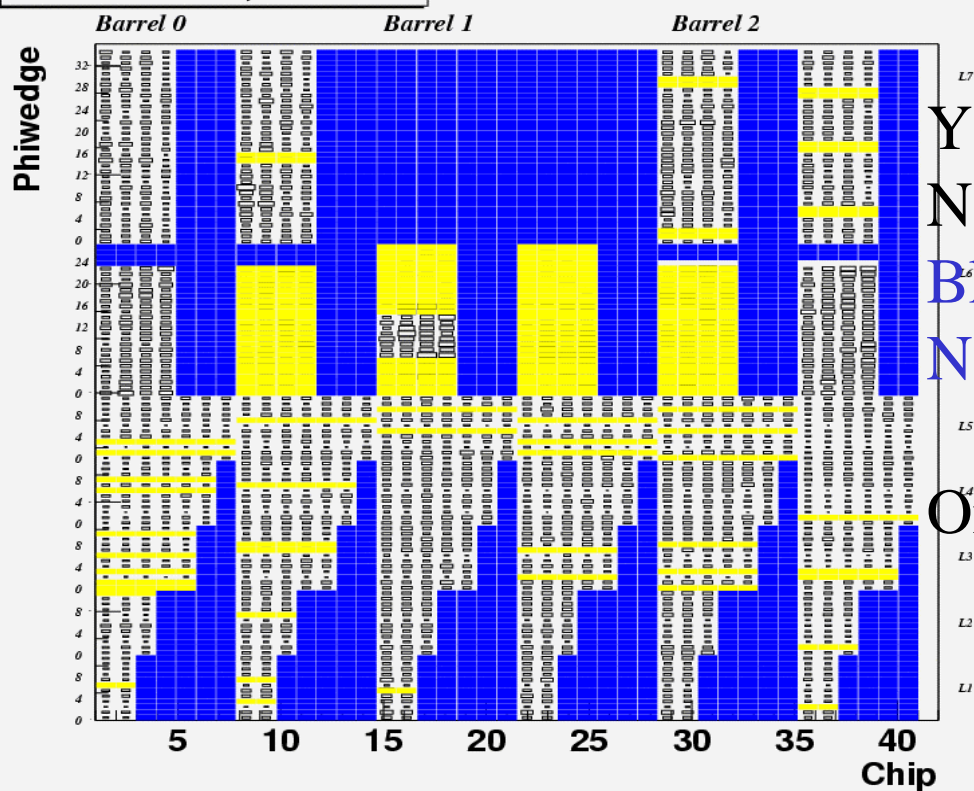
....So far

(problem with MISL banks in 4.9.0 did not  
affect densely populated Pythia events)

SiliMon

Montecarlo

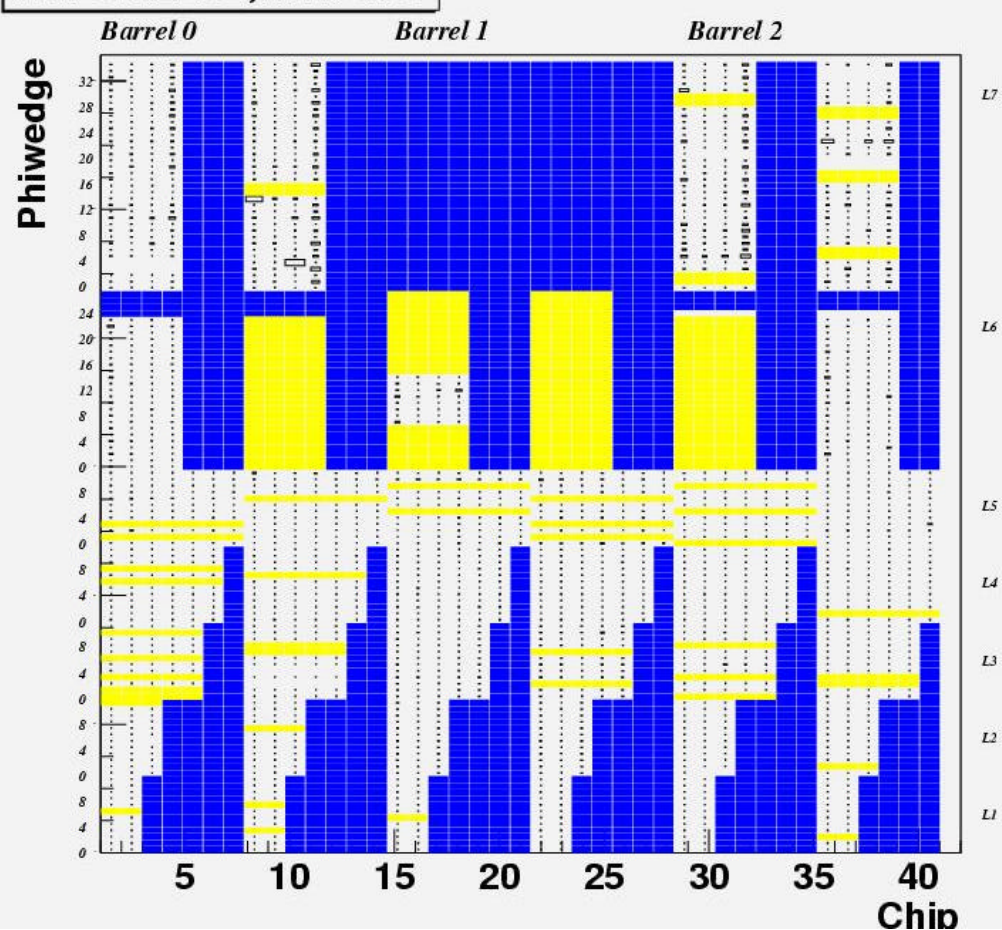
Raw SVX + ISL; RPhi side



Yellow:  
Not integrated  
Blue:  
Non existent.

One chip per cell

Raw SVX + ISL; RPhi side



Data  
Run 142110